## CLAIMS LISTING

- 1. (original) Image storage screen or panel comprising a binderless needle-shaped stimulable phosphor and a substrate, characterized in that said substrate has a surface roughness of less than 2 µm and a reflectivity of more than 80%.
- 2.(original) Screen or panel according to claim 1, wherein said reflectivity is at least 90%.
- 3.(original) Screen or panel according to claim 1, wherein said reflectivity is at least 95%.
- 4.(original) Screen or panel according to claim 1, wherein said substrate has a surface roughness of less than 1  $\mu m$ .
- 5.(original) Screen or panel according to claim 2, wherein said substrate has a surface roughness of less than 1  $\mu m$ .
- 6.(original) Screen or panel according to claim 3, wherein said substrate has a surface roughness of less than 1 µm.
- 7. (original) Screen or panel according to claim 1, wherein said phosphor is a CsX:Eu phosphor, wherein X is selected from Br and Cl.

- 8.(original) Screen or panel according to claim 2, wherein said phosphor is a CsX:Eu phosphor, wherein X is selected from Br and Cl.
- 9. (original) Screen or panel according to claim 3, wherein said phosphor is a CsX:Eu phosphor, wherein X is selected from Br and Cl.
- 10.(original) Screen or panel according to claim 4, wherein said phosphor is a CsX:Eu phosphor, wherein X is selected from Br and Cl.
- 11.(original) Screen or panel according to claim 5, wherein said phosphor is a CsX:Eu phosphor, wherein X is selected from Br and Cl.
- 12.(original) Screen or panel according to claim 6, wherein said phosphor is a CsX:Eu phosphor, wherein X is selected from Br and Cl.
- 13. (original) Screen or panel according to claim 1, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 14. (original) Screen or panel according to claim 2, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.

- 15. (original) Screen or panel according to claim 3, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 16. (original) Screen or panel according to claim 4, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 17. (original) Screen or panel according to claim 5, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 18.(original) Screen or panel according to claim 6, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 19. (original) Screen or panel according to claim 7, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 20. (original) Screen or panel according to claim 8, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 21. (original) Screen or panel according to claim 9, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.

- 22. (original) Screen or panel according to claim 10, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 23. (original) Screen or panel according to claim 11, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 24. (original) Screen or panel according to claim 12, wherein said substrate is an amorphous carbon layer, overcoated with a reflecting layer.
- 25. (original) Screen or panel according to claim 13, wherein said reflecting layer is an aluminum layer.
- 26. (original) Screen or panel according to claim 14, wherein said reflecting layer is an aluminum layer.
- 27. (original) Screen or panel according to claim 15, wherein said reflecting layer is an aluminum layer.
- 28. (original) Screen or panel according to claim 16, wherein said reflecting layer is an aluminum layer.
- 29. (original) Screen or panel according to claim 17, wherein said reflecting layer is an aluminum layer.
- 30.(original) Screen or panel according to claim 18, wherein said reflecting layer is an aluminum layer.

- 31. (original) Screen or panel according to claim 19, wherein said reflecting layer is an aluminum layer.
- 32. (original) Screen or panel according to claim 20, wherein said reflecting layer is an aluminum layer.
- 33. (original) Screen or panel according to claim 21, wherein said reflecting layer is an aluminum layer.
- 34. (original) Screen or panel according to claim 22, wherein said reflecting layer is an aluminum layer.
- 35. (original) Screen or panel according to claim 23, wherein said reflecting layer is an aluminum layer.
- 36. (original) Screen or panel according to claim 24, wherein said reflecting layer is an aluminum layer.
- 37. (original) Screen or panel according to claim 1, wherein a moisture-repellent layer is present inbetween said substrate and said phosphor layer.
- 38.(original) Screen or panel according to claim 4, wherein a moisture-repellent layer is present inbetween said substrate and said phosphor layer.
- 39. (original) Screen or panel according to claim 7, wherein a moisture-repellent layer is present inbetween said substrate and said phosphor layer.

- 40. (original) Screen or panel according to claim 13, wherein a moisture-repellent layer is present inbetween said substrate and said phosphor layer.
- 41. (original) Screen or panel according to claim 1, wherein, adjacent to the said phosphor layer, a moisture-repellent layer is coated as an outermost layer.
- 42. (original) Screen or panel according to claim 4, wherein, adjacent to the said phosphor layer, a moisture-repellent layer is coated as an outermost layer.
- 43. (original) Screen or panel according to claim 7, wherein, adjacent to the said phosphor layer, a moisture-repellent layer is coated as an outermost layer.
- 44. (original) Screen or panel according to claim 13, wherein, adjacent to the said phosphor layer, a moisture-repellent layer is coated as an outermost layer.
- 45. (original) Screen or panel according to claim 37, wherein said moisture-repellent layer is a parylene layer.
- 46. (original) Screen or panel according to claim 38, wherein said moisture-repellent layer is a parylene layer.
- 47. (original) Screen or panel according to claim 39, wherein said moisture-repellent layer is a parylene layer.

- 48. (original) Screen or panel according to claim 40, wherein said moisture-repellent layer is a parylene layer.
- 49. (original) Screen or panel according to claim 41, wherein said moisture-repellent layer is a parylene layer.
- 50.(original) Screen or panel according to claim 42, wherein said moisture-repellent layer is a parylene layer.
- 51. (original) Screen or panel according to claim 43, wherein said moisture-repellent layer is a parylene layer.
- 52. (original) Screen or panel according to claim 44, wherein said moisture-repellent layer is a parylene layer.
- 53. (original) Use of a screen or panel according to claim 1 in a system for computed radiograpy.
- 54. (original) Use of a screen or panel according to claim 4 in a system for computed radiograpy.
- 55. (original) Use of a screen or panel according to claim 7 in a system for computed radiograpy.
- 56. (original) Use of a screen or panel according to claim 13 in a system for computed radiograpy.
- 57. (original) Use of a screen or panel according to claim 37 in a system for computed radiograpy.

- 58. (original) Use of a screen or panel according to claim 41 in a system for computed radiograpy.
- 59. (original) Use of a screen or panel according to claim 45 in a system for computed radiograpy.
- 60.(original) Use of a screen or panel according to claim 53 in mammographic applications.
- 61.(original) Use of a screen or panel according to claim 54 in mammographic applications.
- 62.(original) Use of a screen or panel according to claim 55 in mammographic applications.
- 63.(original) Use of a screen or panel according to claim 56 in mammographic applications.
- 64.(original) Use of a screen or panel according to claim 57 in mammographic applications.
- 65. (original) Use of a screen or panel according to claim 58 in mammographic applications.
- 66. (original) Use of a screen or panel according to claim 59 in mammographic applications.